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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,897	06/05/2006	David Alan Clark	BA9323 US PCT	1909

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E I DU PONT DE NEMOURS AND COMPANY  
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WILMINGTON, DE 19805

EXAMINER
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RAO, DEEPAK R

ART UNIT	PAPER NUMBER
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1624

NOTIFICATION DATE	DELIVERY MODE
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01/25/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/581,897	<b>Applicant(s)</b> CLARK ET AL.	
	<b>Examiner</b> Deepak Rao	<b>Art Unit</b> 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21, 25-40 and 43-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10-14, 30 and 31 is/are rejected.
- 7) ☒ Claim(s) 3-9, 18-21, 25-29, 32-40 and 43-45 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20090415 &amp; 20090501</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This office action is in response to the amendment filed on August 24, 2009.

Claims 1-21, 25-40 and 43-45 are pending in this application.

#### ***Withdrawn Rejections/Objections:***

Applicant is notified that any outstanding rejection/objection that is not expressly maintained in this office action has been withdrawn or rendered moot in view of applicant's amendments and/or remarks.

#### ***The following rejections are under new grounds:***

##### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, in the definition of R<sup>12</sup>, the recitation "R<sup>12</sup> is a divalent radical linking the carboxylic ester function CO<sub>2</sub>R<sup>12</sup> of each of **two pyrimidine ring systems of Formula I**" is not clear. As per claim 1, Formula I contains only one pyrimidine ring and it is not clear what is intended by the instant recitation of 'each of two pyrimidine ring systems'. The specification does not provide any explanation of the above recitation nor illustrates the above with examples.

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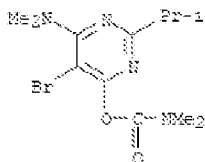
***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

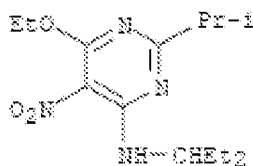
1. Claims 1, 10-14 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoegerle et al., U.S. Patent No. 4,490,375. The instant claims read on reference disclosed compounds, see the structural formula (I) in col. 1 and the corresponding species of compound No. 4 in col. 7 (structure depicted below for convenience):



The reference compounds are disclosed to have plant growth regulating properties, see col. 2, lines 57-59. The instant claims recite that  $R^2$  is  $((O)_jC(R^{15})(R^{16}))_kR$  wherein  $j$  and  $k$  are 0 or 1; and  $R$  is a herbicidally effective derivative of  $CO_2H$  and the specification (see page 10, lines 21-28) provides that the groups represented by  $R$  include a carboxamide.

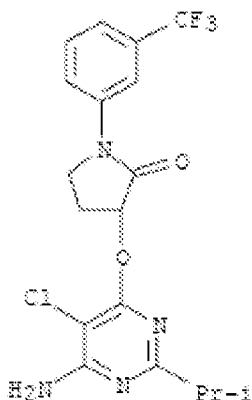
2. Claims 1, 10-14 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischer, U.S. Patent No. 4,014,677. The instant claims read on reference disclosed compounds, see the structural formula (I) in col. 1 and the corresponding species of compounds No. 29-36 in col. 11-12 (structure of a relevant compound depicted below for convenience):

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The reference further teaches the salts of the compounds of formula (I), see col. 2. Further, the reference teaches that “the alkyl, alkoxy and alkylthio radicals represented by  $R_2$  can be further substituted by alkoxy, alkylthio, halogen and cycloalkyl”. The reference compounds are disclosed to be useful as herbicides and plant growth regulators, see col. 15. The instant claims recite that  $R^2$  is  $((O)_jC(R^{15})(R^{16}))_kR$  wherein  $j$  and  $k$  are 0 or 1; and  $R$  is a herbicidally effective derivative of  $CO_2H$  and the specification (see page 10, lines 21-28) provides that the groups represented by  $R$  include any salt, ether, etc.

3. Claims 1, 10-14 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Bojack et al., U.S. Patent Application Publication No. 2003/0171218. The instant claims read on reference disclosed compounds, see the structural formula (I) in page 1 and the corresponding species of compounds No. C18-C24 in page 24 (structure depicted below for convenience):



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The reference compounds are disclosed to have excellent herbicidal activity, see page 12, paragraph [0097]. The instant claims recite that  $R^2$  is  $((O)_jC(R^{15})(R^{16}))_kR$  wherein  $j$  and  $k$  are 0 or 1; and  $R$  is a herbicidally effective derivative of  $CO_2H$  and the specification (see page 10, lines 21-28) provides that the groups represented by the term “herbicidally effective derivative of  $CO_2H$ ” includes numerous groups ‘known in the art which does not extinguish the herbicidal activity of the compound and is or can be hydrolyzed, oxidized, reduced or otherwise metabolized in plants or soil to provide the carboxylic acid function’. The above definition of the term includes numerous possibilities and therefore, given the broadest interpretation of the claim recitation, the compound of instant claims includes the reference disclosed compounds.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1-2, 10-14, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer, U.S. Patent No. 4,014,677. The reference teaches a generic group of 5-nitro-pyrimidine compounds, which embraces applicant's instantly claimed compounds. See formula (I) in col. 1, and the corresponding species of the Examples, particularly compounds No. 29-36 in col. 11-12. The reference further teaches the salts of the compounds of formula (I), see col. 2. Further, the reference teaches that "the alkyl, alkoxy and alkylthio radicals represented by  $R_2$  can be further substituted by alkoxy, alkylthio, halogen and cycloalkyl". The instant claims recite that  $R^2$  is  $((O)_jC(R^{15})(R^{16}))_kR$  wherein  $j$  and  $k$  are 0 or 1; and  $R$  is a herbicidally effective derivative of  $CO_2H$  and the specification (see page 10, lines 21-28) provides that the groups represented by  $R$  include any salt, ether, etc. Further, the definition of  $R^2$  according claim 2 includes the group  $CH_2OR^{13}$  wherein  $R^{13}$  can be an alkyl (i.e., a methyl substituted with an alkoxy). The reference compounds are disclosed to be useful as herbicides and plant growth regulators, see col. 15. The instant claims differ from the reference by reciting specific species or a more limited subgenus than the reference. It would have been obvious to one having ordinary skill in the art at the time of the invention to select any of the species of the genus taught by the reference, including those instantly claimed, because the skilled chemist would have the reasonable expectation that any of the species of the genus would have similar properties and, thus, the same use as taught for the genus as a whole i.e., as herbicides. One of ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole. It has been held that a prior art disclosed genus of useful compounds is sufficient to render prima facie obvious a species falling within a genus. *In re Susi*, 440 F.2d 442, 169 USPQ

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423, 425 (CCPA 1971), followed by the Federal Circuit in *Merck & Co. v. Biocraft Laboratories*, 847 F.2d 804, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989).

### ***Allowable Subject Matter***

Claims 15-17 are allowed. Claims 3-9, 18-21, 25-29, 32-40 and 43-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Receipt is acknowledged of the Information Disclosure Statements filed on April 15 and May 1, 2009 and copies are enclosed herewith.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deepak Rao whose telephone number is (571) 272-0672. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached at (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications



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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Deepak Rao/  
Primary Examiner  
Art Unit 1624**

January 22, 2010